

Notice of Allowability

Application No.

10/032,770

Examiner

DEBBIE M. LE

Applicant(s)

TEDESCO, MICHAEL A.

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/18/06.
2. ☒ The allowed claim(s) is/are 1-24, 26-31, 35-41, 44-50, 52-53, 84-89, 102, 104-110, 113-120, 122-126 (now renumbered as 1-71).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 7/6/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Tony Pezzano on July 6, 2006.

The application has been amended as follows:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for processing a database command, performed by an alternate database engine, the method comprising:

receiving, from a user, a database command requiring data from a first database engine, the first database engine having a command layer for processing database commands; and separately processing the database command using a command layer of an alternate database engine without accessing the command layer of the first database engine;

evaluating the database command to determine system usage of the database command at the database engine, prior to execution of the database command;

determining a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the alternate database engine;
generating a result of the database command; and
transmitting the result to the user submitting the database command.

2. (Original) The method of claim 1, wherein the first database engine stores the data in a first database file.

3. (Original) The method of claim 1, wherein the alternate database engine stores second data in a second database file.

4. (Previously Presented) The method of claim 1, wherein the database command is compatible with one or more of: a Structured Query Language format, a Javascript Database Connectivity (JDBC) protocol and an Open-Database Connectivity protocol.

5. (Original) The method of claim 1, wherein the database command is a query.

6. (Original) The method of claim 5, said processing the database command further comprising:

evaluating the query.

7. (Previously Presented) The method of claim 6, said evaluating further comprising: evaluating the query against system usage.

8. (Currently Amended) The method of claim 7, said evaluating further comprising: evaluating the query based on one or more of: a parameter of the query, a number of relational databases to be accessed for the query, a size of a data field to be searched for the query, an availability of resources of a system maintaining the alternate database engine, an

availability of resources of a system maintaining the first database engine, a number of relational database tables to be employed for the query, a limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored query and/or a number of function calls for the query.

9. (Original) The method of claim 7, further comprising:

submitting the query to the alternate database engine with a limit on a number of returns responsive to the query, based on said evaluating.

10. (Original) The method of claim 7, further comprising
editing the query, based on said evaluating.

11. (Original) The method of claim 7, further comprising:
rejecting the query, based on said evaluating.

12. (Previously Presented) The method of claim 6, wherein said evaluating comprises:
determining, prior to said processing, whether the database command requires accessing the first database engine, and if not, accessing data stored only by the alternate database engine.

13. (Original) The method of claim 12, said determining further comprising:
translating the query to a native format of the alternate database engine.

14. (Original) The method of claim 6, said evaluating further comprising:
determining whether the query requires accessing temporally sensitive data, and if so,
accessing a transaction log of the first database engine.

15. (Cancelled).

16. (Cancelled).

17. (Currently Amended) The method of claim ~~16~~ 1, wherein said transmitting further comprises:

transmitting the result in a format of the first database engine.

18. (Original) The method of claim 1, further comprising:

storing second data in a database file maintained by the alternate database engine.

19. (Original) The method of claim 18, said processing further comprising:

determining whether the database command requires at least a portion of said second data, and if so, identifying said portion responsive to the database command.

20. (Original) The method of claim 1, further comprising:

receiving new data to be provided responsive to database commands; and

storing said new data in a database file maintained by the alternate database engine.

21. (Original) The method of claim 1, further comprising:

receiving new data to be provided responsive to database commands; and

storing said new data in a database file maintained by the first database engine.

22. (Original) The method of claim 1, said processing further comprising:

translating the database command to a native format of the alternate database engine.

23. (Original) The method of claim 1, wherein said processing further comprises:

identifying data stored by the first database engine that is responsive to the database command; and

accessing said identified data, wherein said identifying and accessing are performed exclusively through the command layer of the alternate database engine, without interaction with the command layer of the first database engine.

24. (Previously Presented) The method of claim 1, wherein the alternate database engine executes only read-only database commands.

25. (Cancelled).

26. (Currently Amended) An apparatus for processing a database command, comprising:
a processor; and
a memory in operative communication with the processor, the memory for storing a plurality of processing instructions for directing the processor to:
receive, from a user, a database command requiring data from a first database engine, the first database engine having a command layer for processing database commands;
and
separately process the database command using a command layer of an alternate database engine without accessing the command layer of the first database engine;
evaluate the database command to determine system usage of the database command at the database engine, prior to execution of the database command;
determine a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the alternate database engine;
generate a result of the database command; and
transmit the result to the user submitting the database command.

27. (Currently Amended) A computer-readable medium encoded with processing instructions for implementing a method for processing a database command, performed by an alternate database engine, the method comprising:

receiving, from a user, a database command requiring data from a first database engine,
the first database engine having a command layer for processing database commands; ~~and~~

separately processing the database command using a command layer of an alternate
database engine without accessing the command layer of the first database engine;

evaluating the database command to determine system usage of the database command at
the database engine, prior to execution of the database command;

determining a threshold value for system usage of the alternate database engine, wherein
the threshold value is based on one or more of: estimated processor usage, estimated memory
usage, input/output resource usage and disk resource usage of the alternate database engine;

generating a result of the database command; and

transmitting the result to the user submitting the database command.

28. (Currently Amended) A method for implementing and using an alternate database
engine in conjunction with an established database engine, the method comprising:

providing access to a first database engine to a plurality of users on a computing system,
the first database engine having a command layer for processing database commands;

establishing an alternate database engine on the computing system;

receiving a database command from one of the plurality of users, the database command
directed to data stored by the first database engine; ~~and~~

separately processing the database command using the alternate database engine without
accessing the command layer of the first database engine;

evaluating the database command to determine system usage of the database command at
the database engine, prior to execution of the database command;

determining a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the alternate database engine;
generating a result of the database command; and
transmitting the result to the user submitting the database command.

29. (Currently Amended) The method of claim 29 28, wherein the computer system is one or more of: a local area network, a wide area network, an intranet, an extranet, a wireless network and/or the Internet.

30. (Currently Amended) The method of claim 29 28, wherein the first database engine stores the data in a first database file and the alternate database engine stores data in a second database file.

31. (Currently Amended) The method of claim 29 28, wherein the database command is compatible with one or more of: a Structured Query Language format, a Javascript Database Connectivity protocol and/or an Open-Database Connectivity protocol.

32. (Original) The method of claim 28, wherein the database command is a query.

33. (Cancelled).

34. (Cancelled).

35. (Currently Amended) The method of claim 34 32, said evaluating further comprising:

evaluating the query based on one or more of : a parameter of the query, a number of relational databases to be accessed for the query, a size of a data field to be searched for the query, an availability of resources of a system maintaining the alternate database engine, an

availability of resources of a system maintaining the first database engine, a number of relational database tables to be employed for the query, a limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored query and/or a number of function calls for the query.

36. (Currently Amended) The method of claim ~~34~~ 32, further comprising:
submitting the query to the alternate database engine with a limit on a number of returns responsive to the query, based on said evaluating.

37. (Currently Amended) The method of claim ~~34~~ 32, further comprising
editing the query, based on said evaluating.

38. (Currently Amended) The method of claim ~~34~~ 32, further comprising:
rejecting the query, based on said evaluating.

39. (Currently Amended) The method of claim ~~33~~ 32, wherein said evaluating
comprises:

determining, prior to said processing, whether the database command requires accessing the data of the first database engine, and if not, accessing only data stored by the alternate database engine.

40. (Original) The method of claim 39, said determining further comprising:
translating the query to a native format of the alternate database engine.

41. (Currently Amended) The method of claim ~~33~~ 32, said evaluating further
comprising:

determining whether the query requires accessing temporally sensitive data, and if so, accessing a transaction log of the first database engine.

42. (Cancelled).

43. (Cancelled).

44. (Currently Amended) The method of claim 42 28, wherein said transmitting further comprises:

transmitting the result in a format of the first database engine.

45. (Currently Amended) The method of claim 28, ~~further comprising~~ further comprising:

storing second data in a database file maintained by the alternate database engine.

46. (Original) The method of claim 45, said processing further comprising:
determining whether the database command requires at least a portion of said second data, and if so, identifying said portion responsive to the database command.

47. (Previously Presented) The method of claim 28, further comprising:

receiving new data to be provided to the plurality of users; and

storing said new data in a database file maintained by the first database engine.

48. (Original) The method of claim 28, said processing further comprising:

translating the database command to a native format of the alternate database engine.

49. (Original) The method of claim 28, wherein said processing further comprises:

identifying data stored by the first database engine that is responsive to the database command; and

accessing said identified data, wherein said identifying and accessing are performed exclusively through a command layer of the alternate database engine, without interaction with the command layer of the first database engine.

50. (Previously Presented) The method of claim 28, wherein the alternate database engine executes only read-only database commands.

51. (Cancelled).

52. (Currently Amended) An apparatus for implementing and using an alternate database engine in conjunction with an established database engine, comprising:

a processor; and

a memory in operative communication with the processor, the memory for storing a plurality of processing instructions directing the processor to:

provide access to a first database engine to a plurality of users on a computing system, the first database engine having a command layer for processing database commands;

establish an alternate database engine on the computing system;

receive a database command from one of the plurality of users, the database command directed to data stored by the first database engine; and

separately process the database command using the alternate database engine without accessing the command layer of the first database engine;

evaluate the database command to determine system usage of the database command at the database engine, prior to execution of the database command;

determine a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the alternate database engine;

generate a result of the database command; and

transmit the result to the user submitting the database command.

53. (Currently Amended) A computer-readable medium encoded with processing instructions for performing a method of implementing and using an alternate database engine in conjunction with an established database engine, the method comprising:

providing access to a first database engine to a plurality of users on a computing system, the first database engine having a command layer for processing database commands;

establishing an alternate database engine on the computing system;

receiving a database command from one of the plurality of users, the database command directed to data stored by the first database engine; and

separately processing the database command using the alternate database engine without accessing the command layer of the first database engine;

evaluating the database command to determine system usage of the database command at the database engine, prior to execution of the database command;

determining a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the alternate database engine;

generating a result of the database command; and

transmitting the result to the user submitting the database command.

54. (Cancelled).

55. (Cancelled).

56. (Cancelled).

57. (Cancelled).

58. (Cancelled).

- 59. (Cancelled).
- 60. (Cancelled).
- 61. (Cancelled).
- 62. (Cancelled).
- 63. (Cancelled).
- 64. (Cancelled).
- 65. (Cancelled).
- 66. (Cancelled).
- 67. (Cancelled).
- 68. (Cancelled).
- 69. (Cancelled).
- 70. (Cancelled).
- 71. (Cancelled).
- 72. (Cancelled).
- 73. (Cancelled).
- 74. (Cancelled).
- 75. (Cancelled).
- 76. (Cancelled).
- 77. (Cancelled).
- 78. (Cancelled).
- 79. (Cancelled).
- 80. (Cancelled).

81. (Cancelled).

82. (Cancelled).

83. (Cancelled).

84. (Currently Amended) A method for processing a database command, performed by an alternate database engine, the method comprising:

receiving, from a user, a database command directed to a first database engine, the first database engine having a command layer for processing database commands;

separately processing the database command using a command layer of the ~~alternative~~ alternate database engine without accessing the command layer of the first database engine, said processing further comprising:

evaluating the database command to determine system usage of the query at the database engine, prior to execution of the database command, said evaluating based on one or more of: a parameter of the query, a number of relational databases for the database command, a size of a data field to be searched for the database command, an availability of resources of the database engine, a number of relational database tables to be employed for the database command, a limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored database command and/or a number of function calls for the database command;

determining a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and/or disk resource usage of the alternate database engine;

if the system usage surpasses a threshold value, performing one or more of the following:
submitting the database command to the alternate database engine with a limit on a number of
returns responsive to the database command, editing the database command, and/or rejecting the
database command;

determining whether the database command requires accessing data maintained by the
first database engine, and if not, accessing second data stored only by the alternate database
engine;

determining whether the database command requires accessing temporally sensitive data,
and if so, accessing a transaction log of the first database engine;

translating the database command to a native format of the alternate database engine;
generating a result of the database command; and

transmitting the result to the user in a format of the first database engine.

85. (Previously Presented) The apparatus of claim 26, further comprising:
receiving new data to be provided responsive to database commands; and
storing said new data in a database file maintained by the alternate database engine.

86. (Previously Presented) The apparatus of claim 26, further comprising:
receiving new data to be provided responsive to database commands; and
storing said new data in a database file maintained by the first database engine.

87. (Previously Presented) The apparatus of claim 26, said processing further
comprising:

translating the database command to a native format of the alternate database engine.

88. (Previously Presented) The apparatus of claim 26, wherein said processing further comprises:

identifying data stored by the first database engine that is responsive to the database command; and

accessing said identified data, wherein said identifying and accessing are performed exclusively through the command layer of the alternate database engine, without interaction with the command layer of the first database engine.

89. (Previously Presented) The apparatus of claim 26, wherein the alternate database engine executes only read-only database commands.

90. (Cancelled).

91. (Cancelled).

92. (Cancelled).

93. (Cancelled).

94. (Cancelled).

95. (Cancelled).

96. (Cancelled).

97. (Cancelled).

98. (Cancelled).

99. (Cancelled).

100. (Cancelled).

101. (Cancelled).

102. (Currently Amended) The ~~method~~ computer readable medium of claim 27, wherein the database command is a query ~~said processing the database command further comprising:~~
~~evaluating the query.~~

103. (Cancelled).

104. (Currently Amended) The computer readable medium ~~method~~ of claim ~~103~~ 102,
said evaluating further comprising:

evaluating the query based on one or more of: a parameter of the query, a number of relational databases to be accessed for the query, a size of a data field to be searched for the query, an availability of resources of a system maintaining the alternate database engine, an availability of resources of a system maintaining the first database engine, a number of relational database tables to be employed for the query, a limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored query and/or a number of function calls for the query.

105. (Currently Amended) The computer readable medium ~~method~~ of claim ~~103~~ 102,
further comprising:
submitting the query to the alternate database engine with a limit on a number of returns responsive to the query, based on said evaluating.

106. (Currently Amended) The computer readable medium ~~method~~ of claim ~~103~~ 102,
further comprising
editing the query, based on said evaluating.

107. (Currently Amended) The computer readable medium ~~method~~ of claim ~~103~~ 102,
further comprising:

rejecting the query, based on said evaluating.

108. (Currently Amended) The computer readable medium ~~method~~ of claim 102, wherein said evaluating comprises:

determining, prior to said processing, whether the database command requires accessing the first database engine, and if not, accessing data stored only by the alternate database engine.

109. (Currently Amended) The computer readable medium ~~method~~ of claim 108, said determining further comprising:

translating the query to a native format of the alternate database engine.

110. (Currently Amended) The computer readable medium ~~method~~ of claim 102, said evaluating further comprising:

determining whether the query requires accessing temporally sensitive data, and if so, accessing a transaction log of the first database engine.

111. (Cancelled).

112. (Cancelled).

113. (Currently Amended) The computer readable medium ~~method~~ of claim ~~112~~ 27, wherein said transmitting further comprises:

transmitting the result in a format of the first database engine.

114. (Currently Amended) The computer readable medium ~~method~~ of claim 27, further comprising:

storing second data in a database file maintained by the alternate database engine.

115. (Currently Amended) The computer readable medium ~~method~~ of claim 114, said processing further comprising:

determining whether the database command requires at least a portion of said second data, and if so, identifying said portion responsive to the database command.

116. (Previously Presented) The apparatus of claim 52, further comprising:
receiving new data to be provided to the plurality of users; and
storing said new data in a database file maintained by the first database engine.

117. (Previously Presented) The apparatus of claim 52, said processing further comprising:

translating the database command to a native format of the alternate database engine.

118. (Previously Presented) The apparatus of claim 52, wherein said processing further comprises:

identifying data stored by the first database engine that is responsive to the database command; and

accessing said identified data, wherein said identifying and accessing are performed exclusively through a command layer of the alternate database engine, without interaction with the command layer of the first database engine.

119. (Previously Presented) The apparatus of claim 52, wherein the alternate database engine executes only read-only database commands.

120. (Currently Amended) The ~~method~~ computer readable medium of claim 53, wherein the database command is a query ~~said processing the database command further comprising: evaluating the query.~~

121. (Cancelled).

122. (Currently Amended) The ~~method~~ computer readable medium of claim ~~121~~ 120,
wherein said evaluating further comprising es:

evaluating the query based on one or more of: a parameter of the query, a number of relational databases to be accessed for the query, a size of a data field to be searched for the query, an availability of resources of a system maintaining the alternate database engine, an availability of resources of a system maintaining the first database engine, a number of relational database tables to be employed for the query, a limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored query and/or a number of function calls for the query.

123. (Currently Amended) The computer readable medium ~~method~~ of claim ~~121~~ 120,
further comprising:

submitting the query to the alternate database engine with a limit on a number of returns responsive to the query, based on said evaluating.

124. (Currently Amended) The computer readable medium ~~method~~ of claim ~~121~~ 120,
further comprising:

editing the query, based on said evaluating.

125. (Currently Amended) The computer readable medium ~~method~~ of claim ~~121~~ 120,
further comprising:

rejecting the query, based on said evaluating.

126. (Currently Amended) The computer readable medium ~~method~~ of claim ~~121~~ 120,
wherein said evaluating comprises:

determining, prior to said processing, whether the database command requires accessing the first database engine, and if not, accessing data stored only by the alternate database engine.

127. (Cancelled).

128. (Cancelled).

129. (Cancelled).

130. (Cancelled).

131. (Cancelled).

132. (Cancelled).

133. (Cancelled).

134. (Cancelled).

135. (Cancelled).

136. (Cancelled).

137. (Cancelled).

138. (Cancelled).

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140. (Cancelled).

141. (Cancelled).

142. (Cancelled).

143. (Cancelled).

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151. (Cancelled).

152. (Cancelled).

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156. (Cancelled).

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160. (Cancelled).

161. (Cancelled).

162. (Cancelled).

163. (Cancelled).

164. (Cancelled).

165. (Cancelled).

166. (Cancelled).

167. (Cancelled).

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or fairly suggest separately processing the database command using the alternate database engine without accessing the command layer of the first database engine evaluating the database command to determine system usage of the database command at the database engine, prior to execution of the database command, determining a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the alternate database engine, as detailed in claims 1, 26, 27, 28, 52 and 53.

The prior art of record fails to teach or fairly suggest separately processing the database command using a command layer of the alternate database engine without accessing the command layer of the first database engine, said processing further comprising: evaluating the database command to determine system usage of the query at the database engine, prior to execution of the database command, said evaluating based on one or more of: a parameter of the query, a number of relational databases for the database command, a size of a data field to be searched for the database command, an availability of resources of the database engine, a number of relational database tables to be employed for the database command, a limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored database command and/or a number of function calls for

the database command, determining a threshold value for system usage of the alternate database engine, wherein the threshold value is based on one or more of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the alternate database engine, if the system usage surpasses a threshold value, performing one or more of the following: submitting the database command to the alternate database engine with a limit on a number of returns responsive to the database command, editing the database command, and rejecting the database command, determining whether the database command requires accessing data maintained by the first database engine, and if not, accessing second data stored only by the alternate database engine, determining whether the database command requires accessing temporally sensitive data, and if so, accessing a transaction log of the first database engine and translating the database command to a native format of the alternate database engine, as detailed in claim 84.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBBIE M. LE whose telephone number is (571) 272-4111. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'DEBBIE LE', is written over a horizontal line.

DEBBIE LE
PRIMARY EXAMINER

July 7, 2006.